

ABSTRACT OF THE DISCLOSURE

An apparatus and method provide for performing either an overflow or underflow comparison while minimizing overflow/underflow comparison circuitry. In particular, the apparatus and are implemented with overflow/underflow possible check circuitry that determines if a mathematical operation between a first exponent signal and a second exponent signal creates a potential overflow condition. The overflow/underflow possible check circuitry generates a signal indicating whether an overflow or underflow condition is a possibility. Exponent compare circuitry computes an actual overflow or underflow condition.

10 The exponent compare circuitry computes an actual overflow condition if the signal, from the overflow/underflow possible check circuitry, indicates that overflow is possible, and computes an actual underflow condition if the signal, from the overflow/underflow possible check circuitry, does not indicate overflow is possible.